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BEEBLET

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BBC / ACORN

COMPUTER USER GROUP NZ (inc)

NOTES

Wellington is certainly living up to its reputation re the weather this month - a severe cold rendered my magazine weekend rather less productive than usual. We seem to be going through one of the down cycles in terms of contributions also - still, I've only got another 29 pages to write...

Has anyone been experimenting with graphics, writing games or working on hardware projects? Reviews are a bit thin on the ground too - would anyone like to try their hand? I am interested in Users views about and experiences with new (for them) pieces of software or hardware. Short notes, such as that provided by Adrian (p31 May Beeblet) are also of interest.

USER GROUP MEMBERS SPECIAL MASTER PRICE

The special price for Masters offered to UG members is no longer available from most dealers. If you were planning to get a Master in the next few weeks then I suggest you approach Barsons NZ Ltd (the Auckland based NZ Acorn Agent) directly.

KITE FLYING -

It has been suggested that in view of an apparent trend towards falling membership and the growth of local groups, the current national newsletter could be reduced to a few pages despatched every two months. Programs etc currently published in Beeblet could be supplied to local groups and interested individuals on disc. The sub would drop to say $5.

COMING...

- A beginners series
- Using filing system commands
- More hardware articles
- More from Tony Krzyzewski

* * *

Beeblet is assembled by Bruce Wills who can sometimes be found at 861-662 (home) or 729-929 x340 (work).

DISCLAIMER

The views of the reviewers, the Editor and other contributors are not necessarily shared by the BBC/ACORN COMPUTER USER GROUP NZ (INC).

REGIONS

AUCKLAND:

Now meet twice a month, on the second and third Wednesdays, at the Social Room (?) of Auckland Hospital, 7-30 pm. The next meeting in September is the AGM of the what is to be an autonomous group - ie the Auckland group is evidently planning to break away from the national group.

DUNEDIN:

I had a long talk with Martin McDowall who felt the Dunedin group was neglected by both the User Group and in terms of BBC sales and servicing generally. A number of specific problem areas were identified, including the supply and handling of contributions to Beeblet. These can readily be resolved. The other areas of concern relate to the mushroom syndrome: being kept in the dark and... For instance, The Master was only just making its appearance in Dunedin.

Unfortunately, Dunedin is not the only area to feel neglected. Similar feelings have been expressed in Wellington.

The NZ BBC agents, Barsons Ltd, are based in Auckland. In past releases of new equipment, they seem to have experienced delays and or limited initial allocations. Having themselves been subject to the computer industry's predilection for crowing about new products well before they have any hope of delivering them, they have adopted a policy of not widely promoting specific products until they believe they have a realistic chance of being able to deliver.

Barsons are also concentrating most of their promotion into the educational market where a high proportion of BBCs are sold. One should also remember that Auckland is a large, readily accessable market... Barsons have experienced some difficulty in establishing a network of qualified dealers/service agents throughout the country.

Anyway, to get back to Dunedin, the combined User Groups in the area are planning to involve themselves in a small exposition in early September. The emphasis will be on the home, and to a lesser extent, small business.

NELSON:

There seems to be a very active local group of users with a good selection of equipment and a wide spectrum of experience. The last communication I saw was from Richard Jack, who also mentioned the existance of a local (indepenent?) BBC/Electron Users Group. I would be happy to put a Nelson member's name and telephone number on the back cover as a contact point : any volunteers?

ROTORUA:

An independent user group has been established in Rotorua. It meets on the first Tuesday of each month - contact Ian 85-583 or Joan 81-536.

TOKOROA:

Three newsletters were delivered to me last month from the Tokoroa Acorn Users Group (April, May and June) together with a covering letter from the Secretary, Graham Robertson - just after Beeblet was sent off to the printer. At the rate local newsletters are set up, soon all I will have to do is provide a central clearing house... (see the note on Bulletin Boards..).

Graeme reports that the group has seen a revival of interest in recent months, with 10 - 15 users regularly attending meetings. These range from beginners up to the new President, Don Austin. Graeme also offered Beeblet access to their material. Further discussions with Graeme elicited that educational software and experimentation with a "buggy" (driven by the Beeb) was planned for 19 September, and probably something on disc filing systems for 3 October. A lot of people have recently aquired printers too..

WELLINGTON:

I asked a recent meeting what sort of contributions they would like to see published in Beeblet. A short list was rapidly compiled:

- a beginners series
- filing system commands
- educational applications
- business/industrial uses
- hardware projects
- special effects (graphics)
- games
- a childrens page
- how to produce a printout down the length of one or more pages, rather than across?

I then sought potential authors, with rather more limited success! Any other suggestions (subjects or authors) ?

Forward Programme:

Wednesday 10 September: Pagemaker / Radio
Thursday 9 October: Barsons?, ADFS / new products
Wednesday 12 November: Printers

(the October and November meetings could well be swapped around)

Early December: Videotex
Late January: Education: Parents and Children
Early February: Picnic

****

PROLIFERATING ACORNS...

A recent letter from Barsons notes that since March 1983 they have sold in excess of 4,000 BBCs, 3,000 Electrons, and 350 Masters (the latter since March 1986). And then there are all those which were imported directly..

****

Joe Joyce was recently at Canterbury University and had the opportunity to compare Acorn's Cambridge Workstation with facilities available from a time sharing mainframe system. Those involved were evidently impressed with the Cambridge Workstation's relative performance, and cost compared to the mainframe's time charges for that one (large) job....

$$$ CONTEST !! $$$

Beeblet will offer a prize of one box of 5.25" floppy discs or equivalent to theUser Group author submitting the best game program designed to be played interactively on two Acorn machines connected together with a serial link (ie. RS432 or even the cassette port).
Entries close at the end of November.

BULLETIN BOARDS

The Auckland group's Bulletin Board (running on a BBC) is apparently very active and is working very well - provision has even been made to accomodate some interested Commodore users... The Bulletin Board can be accessed 24 hours a day on 390-836. The format used is 300-300 baud, 8 data, 1 stop and no parity bits.

Meanwhile, the Wellington Microcomputer Society Inc is planning to setup a 24 hour Bulletin Board on an IBM XT (20 meg. hard disc) to replace the one previously installed on the Vax Bryce Francis Ltd used to own. The machine has been ordered... The Society includes owners of a wide variety of machines, and thus the Bulletin Board can be expected to cater for a fair few. As it happens, the Editor's Beeb may well be located in close physical proximity to the IBM micro...

NEWS

Locally manufactured MASTER series cartridges are now available from John Gilbert Electronics at $35-00 each.

****

MASTER Reference Guides Part 1 are currently being landed by Barsons. VIEW-SPELL is also now available.

****

MASTER owners may be aware of the problems experienced with some of the batteries fitted to these machines - a few have been known to overheat severely or even explode. This can happen when the battery eventually runs down and the system in effect tries to charge it up. The batteries are non rechargeable..

Barsons will soon announce replacement procedures - MASTER owners will be able to either install the appropriate replacement battery themselves, or send their machine to Barsons (or a service agent?).

****

FILE DUMP

by BILL T.

After having used a database program (Gemini) to create a file of records, I then wanted to print them differently to the standard format used by the database package. But in order to write my own program to print the file it was necessary to discover the format of the file.

The result is this simple utility program which will list a file onto either the screen or my printer (Logitec), in either byte format or in both hex & byte formats.

Because some bytes may contain bit combinations which give screen or printer control codes, the program intercepts any bytes which are not in the range of printable characters (i.e. ASCII codes 32 - 126) and replaces them with a fullstop.

The program has only been tested with files on tape, but presumably would function identically with a disk file?

....

EDITOR'S NOTE: Yes, it works on disc systems. This program provides a useful starting point for less experienced BBC users who are interested in learning about storing and retrieving data (as opposed to programs) on cassette. Start with Chapter 35 of the BBC User Guide... I will arrange a further example of a similar program for disc systems, and perhaps the additional advantages of the "random access" capabilities of the latter. Articles on elementry filing system commands are also in the pipeline.

....

The ESCAPE key and other "errors" are trapped using ON ERROR so that the screen can be returned to normal and the printer de-activated before the program terminates.

PROCEDURES (in alphabetic order)

PROCerror -
calls the normal finish routine; prints the error message using REPORT; resets the screen window to full screen (not using VDU26 because that puts the cursor at the home position)

PROCfinish -
closes the file; spaces the printer (if used) up 5 lines; restores output to the screen; turns off the printer; cancels screen paging

PROCinit -
obtains the filename & opens the file; ascertains if printer output and hex format are required; initialises screen/printer; outputs the two heading lines; sets screen window for output to the screen

PROConecharac -
handles one character as read from the file using BGET#; replaces a non-printable character with a fullstop; adds the character or its replacement to the current line; converts the byte to hex format and adds it to the hex line

PROConeline -
initialises for a new line; tabs the printer; calls PROConecharac either 8 or 40 times to build up either a hex + byte line or a byte-only line; prints the line

PROCscreenoff -
exists only to satisfy BASIC requirements for *FX statements - in this case to direct output to he printer only

VARIABLES

INTEGERS

C% - counts characters in the current line

F% - file number, set by the OPEN

I% - counter for FOR loops

L% - number of bytes in each output line

STRINGS

B$ - holds the hex equivalent of each input character

H$ - Y(es) or N(o) for hex listing

IN$ - the character equivalent of the current byte

P$ - Y(es) or N(o) for printer output

filename$ - the name of the file to be dumped

line$ - used to hold the byte string for the current line

line2$ - used for the hex version of the current line

NUMBERS

IN - ASCII version of current character.

```
 10 REM     ** FILE DUMP **
 20 REM
 30 REM    ** Version 1.0 **
 40 REM      by W A Tillick
 50 REM        April 1986
 60
 70 MODE 7
 80 PROCinit
 90 REPEAT
100   PROConeline
110   UNTIL EOF#(F%)
120 PROCfinish
130 PRINT'CHR$(130);"FINISHED"
140 VDU28,0,24,39,0
150 END
160
170 DEFPROCinit
180 REM--------
200 *OPT1,0
210 INPUT "Enter File Name " filename$
215 PRINT"Loading ..."
220 F%= OPENUP(filename$)
230 IN=BGET#(F%):IN$=CHR$(IN)
240 line2$=STRING$(24,"X")
250 line$=STRING$(40,"X")
260 PRINT'"Is printer output required
    (Y/N)? ";
270 REPEAT
280   P$=GET$
290   UNTIL INSTR("YyNn",P$) )0
300 PRINT P$
310 IF P$="y" P$="Y"
315 ON ERROR PROCerror
320 PRINT'"Is Hex listing required (Y/
    N)? ";
330 REPEAT
340   H$=GET$
350   UNTIL INSTR("YyNn",H$) )0
360 PRINT H$''
370 IF H$="y" H$="Y"
380 IF H$="Y" L%=8 ELSE L%=40
390 IF P$="Y" VDU2,1,27,1,64,1,27,1,68
    ,1,15,1,0,1,9 ELSE CLS
400 VDU3:PRINTCHR$(129);CHR$(157);CHR$
    (131);:IF P$="Y" VDU2
410 PRINT"    * *  F I L E   D U M P
    * *"'
420 VDU1,9,3:PRINTCHR$(130);:IF P$="Y"
     VDU2
430 PRINT"          FILE NAME = ";filena
    me$,'
440 IF P$="Y" PROCscreenoff ELSE VDU 2
    8,0,24,39,4:VDU 14:CLS
450 ENDPROC
460
470 DEFPROConeline
480 REM-----------
490 line$="":line2$=""
500 C%=0
510 IF P$="Y" VDU9
520 REPEAT
```

Continued
on page 11.

NEWS - EDUCATION

Mr Rob Bell (of Edmonds Nelson & Associates) has supplied the following notes on behalf of the Institute of Computer Based Learning, Auckland:

A group of prominant educationalists and Auckland businessmen have joined forces to provide remedial and motivational teaching programs for use with micro computers.

The development and marketing of the programs will be carried out by the Auckland based Institute of Computer Assisted Learning.

The programs will cater for children between 7 and 17 years, and will be financed under a special partnership which is soon to be announced.

The software is being tailored for use in both classroom and home.

It will be designed as an educational aid for all children, not only those who need additional support or more motivation to learn. The gifted who need to be further extended will also benifit greatly.

……

Editor's Note:

Evidenttly the ICAL programs will be launched for running on the BBC micro, and extended to the Apple 2c later this year. IBM compatibility will follow.
A Melbourne based computer aided learning specialist, Mrs Liddy Neville, of Barson (Australia) Research Pty Ltd, is one of three experts "advising ICAL on how best to assist 'at risk' children to repair their damaged self esteem and give them the courage to 'have another go'..". She has apparently recently talked to "educationalists" in Auckland about the scheme.

I have a more detailed press release which outlines these developments together with a summary of the briefing provided in Auckland by Mrs Neville and I would be happy to supply a copy to any interested members.

ααα↓↓

...educational HELP wanted......

I should also like to arrange a series of articles relating to the use of micro computers in NZ education (both home and school), a survey of available literature, software and other resources. This should include the experiences of various schools with BBC networks.

I should like to hear from anyone with an interest in this area. The views of parents with an interest in home education (what do they want, have they found anything useful...?) is of particular interest, as well teachers and others involved in the wider eductional arena.

Would anyone be prepared to co-ordinate such a series? I can provide an initial range of reference material and contacts: the only requisites for the job are:

1/ interest
2/ the ability to investigate, research and report clearly.

Please contact me (the Editor) if you are interested, or know of someone who might be.

Continued from page 9.

```
530   PROConecharac
540   UNTIL C%=L% OR EOF#(F%)
550 IF H$="Y" PRINTline$;TAB(10);line2
    $ ELSE PRINTline$
560 ENDPROC
570
580 DEFPROConecharac
590 REM-------------
600 IF IN<32 OR IN >126 line$=line$+".
    " ELSE line$=line$ + IN$
610 B$=STR$~(ASC(IN$))
620 IF LEN(B$)=1 B$="0"+B$
630 IF H$="Y" line2$=line2$ + B$ +" "
640 C%=C%+1
650 IN=BGET#(F%):IN$=CHR$(IN)
660 ENDPROC
670
680 DEFPROCfinish
690 REM----------
700 CLOSE#(F%)
710 *OPT1,1
720 FOR I%=1 TO 5
730   VDU1,13
740   NEXT
750 *FX3,0
760 VDU15
770 VDU3
780 ENDPROC
790
800 DEFPROCscreenoff
810 REM---------------
820 VDU3:PRINT'"Printing ...":VDU2
830 *FX3,10
840 ENDPROC
850
860 DEFPROCerror
870 REM---------
880 ON ERROR OFF
890 REPORT
895 IF P$="Y" PRINT" "; ELSE PRINTCHR$
    (129);
900 PRINT"at line ";ERL
905 PROCfinish
907 IF P$="Y" PRINT"Interrupted by ...
    ";:REPORT:PRINT
910 VDU28,0,24,39,0
920 END
930 ENDPROC
```

↑↑↑

AUTOMATIC SCALING OF GRAPHS

Anton Erasmuson

When plotting out graphs, one wants all the points to be on the page and spread out as much as reasonably possible. This can be achieved easily by using a scale factor equal to the available width/height divided by the range of values. However, if one is also required to mark each axis with 'nicely' judged steps, where nice means 1,2,3,4.. or as close as one can get, then there is more of a problem. There is no strict mathematical solution as the problem is ill-defined. I have a solution here that makes the following assumptions:

1) There are from 5 to 9 marks on an axis, and the minimum and maximum values lie within or on these limits.

2) 'Nice' means that steps of 2, 1, .5 or .25 * (some power of 10) are allowed. A step is the interval between marks.

The algorithm solving this is given as PROCscale: the lines from "step = 4*.. to low>=4" are the essence of the whole program. The rest is really showing how it can be used. I've put it all together in a bit of a hurry so I cant be certain that it is bug-free. One problem that is still present is that long exponents (say 1E12 or 3E-15) mess up the labling of the axes. That can be solved by dividing by a power of 10 close in size to 'step'. Figure it out for yourself as this is a hurried article.

```
 10 REM *** Auto scaling for graphs.**
    *
 20 REM Anton Erasmuson, Aug'86
 30
 40 MODE0:@%=&409:VDU29,240;60;
 50 N%=50
 60 DIM point(N%,1)
 70 REPEAT
 80   CLS
 90   PROCfakedata
100   PROCgraphdata
110   wait = INKEY(1000)
120   UNTIL FALSE
130 END
140
150 DEF PROCgraphdata
160 MOVE960,0:DRAW0,0:DRAW 0,960
170 xmin = point(1,0):xmax = xmin
180 ymin = point(1,1):ymax = ymin
190 FOR I%=2 TO N%
200   IF point(I%,0) < xmin THEN xmin
      = point(I%,0)
210   IF point(I%,0) > xmax THEN xmax
      = point(I%,0)
220   IF point(I%,1) < ymin THEN ymin
      = point(I%,1)
230   IF point(I%,1) > ymax THEN ymax
      = point(I%,1)
240   NEXT
250 PROCscale(xmin,xmax)
260 xlow=low: xscale=scale: xstep=step
270 PROCscale(ymin,ymax)
280 FOR I%=1 TO N%
290   PLOT 69, xscale*(point(I%,0)-xlo
      w),scale*(point(I%,1)-low)
300   NEXT
```

Continued on page 14

ELECTRON POINTERS

John B. Waiheke Island

Editors Thanks:

John, thank you very much for your letter and the sentiments expressed. These short contributions often more entertainment and, perhaps, edification, than many a long disertion.. Over to John-

The little program enclose is very simple - the screen is filled with triangles of random size, in a random position and of random colour.

To me the program illustrates the power of the Electron's graphics - the program repeats itself and on each run changes the background colour with a FOR TO loop. GCOL RND(244), RND(COLOUR) determines the colour of each triangle with Boolean logic. The colours are prevented from flashing by the *FX9,0 command at the start of the program.

The program also illustrates how it is possible to get PLANES or FIELDS of colour on a two dimensional screen. The delay time set to slow down the plotting of triangles can be reset with the INKEY command to a time to suit the individual.

I find the program has therapeutic value. I dim the lights, put on suitable music and just sit back and relax.

Ladies and Gentlemen, A TOAST
"Here's to the genius of George Boole (1815-64), as Computer Users we must pay tribute to this remarkable man.

```
 10 REPEAT
 20  *FX9,0
 30  TIME=0
 40  MODE2
 50   FORc%=129 TO 135
 60    COLOURc%
 70    Key=INKEY(100)
 80    CLS
100    MOVE-400,350
105    FOR q=0 TO 224
110      GCOLRND(q),RND(16)
130      x=RND(1279)
140      y=RND(1024)
```

```
 150      PLOT 85,x,y
 155      Key=INKEY(50)
 180      NEXT
 190     NEXTc%
 200   MODE6
 210   PRINT TIME/6000" Minutes"
 220   Key=INKEY(400)
 230   UNTIL TIME>10^6/6000
```

(Listed using L.O7 command).

ADS

FOR SALE:

Solidisk 64K sideways RAM
Epson 40 Track DS disc drive

Phone Andrew, Hamilton (071) 434-008

Brother electronic typewriter (EP44). Battery or mains powered. Also has serial input so it can act as a printer for a BBC Computer. Printer cable supplied. Hardly used. Price $350-00.

Contact L. Crosthwait, Correspondence School, Wellington. Phone 736-841

Continued from page 14

```
310 VDU5
320 FOR I%=0 TO 8
330   X%=xscale*step*I%
340   MOVE X%,0:DRAW X%,-20
350   MOVE X%-10,-25:PRINT STR$(xlow+x
      step*I%)
360   Y%=scale*step*I%
370   MOVE 0,Y%:DRAW -20,Y%
380   MOVE-100,Y%:PRINT STR$(low+step*
      I%)
390   NEXT
400 VDU4
410 ENDPROC
420
430 DEF PROCscale(p,q)
440 step = 4*10^INT(LOG(q-p))
450 REPEAT
460   step = step/2
470   low = INT(p/step)
480   UNTIL q/step-low)=4
500 scale = 960/step/(INT(q/step-low)+
    1)
510 low = low*step
520 ENDPROC
530
540 DEF PROCfakedata
550 REM rubbish in = rubbish out, eh?
560 LOCAL j,k
570 j=RND(1):k=10^(4*RND(1)-1)
580 FOR T% = 1 TO N%
590   point(T%,0) = (RND(1)-j)*k
600   point(T%,1) = (RND(1)-j)*k
610   NEXT
620 ENDPROC
```

HELP

A Forum Conducted by Steven Rose

Well, this month I'm using a different format to see if anybody notices and comments. If I don't get any response at all, I might do something diabolical next time. Perhaps I'll reverse the order of the words in the whole column (siht ekil ebyaM), or (instead this like). A WW+ program to do this shouldn't be hard. YOU HAVE BEEN WARNED!

Before I get to the problems, a few words to those of you who think they might have something to send in, but wonder whether it's written well enough, or whether it might offend "purists".

PLEASE SEND IT IN!!!

Everybody who writes programs professionally looks back at those they wrote at the beginning of their career, and throw up their hands in horror. All it means is that we've learnt something in the meantime.

The only criticism that should be levelled should be constructive, with reasons. Preferably supported by a second opinion from somebody unknown by the criticiser. No program is perfect. I have never encountered a program that I couldn't legitimately criticise, including my own.

Statements like "Programs that aren't structured are not worth looking at" are simply not true. I have one which is unstructured because it has to be (it corrupted the BASIC stacks), and is quite useful.

Programs with GOTO are perfectly okay, as long as the flow of the program is clear to someone seeing it for the first time.

Sometimes a GOTO simplifies things and makes the logic clearest. People who disagree should try writing a large COBOL program without using a GOTO!

Finally, every program is interesting to somebody. Why did YOU write it ? Are your circumstances unique ? Are none of your ideas worth borrowing ? Is none of your program unique ?

PROBLEMS

Q1. I've had two requests for help in getting T-DRAW2 to work with a disc system. The problem is that a BAD MODE error surfaces at line 100 or thereabouts.

Q2. Bill Tillick, the author of T-DRAW, wants to be able to return to the line where an error occurred, when he has an ON ERROR statement in the program.

Q3. John Jamieson has the automatic disc menu utility from Beebug. He added a line that reads

```
IF type%(A%)=2 PROCoscli("LOAD" + name$(A%) + 8000 + 7 + Q)
```

The program later has "DEF PROCoscli(A$)"

When he runs the program, he gets "TYPE MISMATCH AT LINE nnnn"

SOLUTIONS

A1. T-DRAW2 is simply too long to use in Mode 0, 1, or 2 when PAGE is set to &1900 (disc system setting). The solution is to delete all comment lines and blank lines, and modify T-DRAW to read

```
PAGE = &1500 : CHAIN "T-DRAW2"
```

You may have to lower PAGE further, depending on how many REMs and blank lines you deleted. It is safe to use anything down to &1200 with the current version, as it doesn't use any OPEN___ statements, which use RAM above &1200.

This leaves room for about thirty names (variables or procedures) after allowing for procedure calls, which use 256 bytes each call.

A2. The simple answer to this appears in the U.G. on page 251. Simply say

variable_name = ERL

You can then GOTO (horrors!) or GOSUB (yech!!) variable_name.

That was the good news (tongue now removed from cheek). The bad news is that an error causes the BASIC stacks to be cleared, which means that all procedures, functions, REPEATs, FORs, GOSUBs and READ statements are forgotten.

This in turn means that if you GOTO the middle of a procedure, function, subroutine or FOR/REPEAT loop, you'll get another error when you reach the end of the loop. There is no easy way to get around this, because the damage is done after the error, but before any BASIC statement is processed (e.g. in an ON ERROR statement).

The only way to avoid this is to use machine code. You can recover from some errors by intercepting the break vector and doing whatever is appropriate for that error (First buy the BASIC ROM U.G.). To avoid the problem for every possible error I believe that you would have to use interrupts to frequently (every 50th of a second might be fast enough) save both the 6502 stack and all the BASIC stacks, the heap, etc (except the variables which survive anyway). The idea being to save everything before each statement is executed. Then if an error occurred, you could restore everything and GOTO a line number. This method would drastically slow BASIC down: a Commodore 64 would probably be much faster, assuming that you used sideways RAM or similar.

A3. The reason for this error is that PROCoscli expects a string to be passed to it. BASIC tries to combine ' "LOAD"+name$(A%)' and succeeds. Then it finds a '+', so tries to add '8000 + 7 + Q' which produces an integer result instead of a string, so you get the TYPE MISMATCH error. If you use '+ STR$(8000 + 7 + Q)' you should have no problems.

Well, apart from one hardware-related request thats still being looked into, thats all I've received this month. Keep them coming!

HELP

At a recent Wellington UG meeting Maurice Powell handed me the "Gridman" listing out of the August 1984 Micro User. He wanted to know how this was done - could we print the program? Maurice also noted that Beeblet listings have the line numbers separated to the left of the program listing (even where the lines are folded) - do we use special software?

Reply:

For details of the Micro User software, see the July 1983 issue of Micro User - I can probably lend a to anyone interested (I don't have a the Micro User program).

Beeblet uses a program written some time ago by Tim Ryan. Tim says it has one or two minor bugs still (I think commas confuse it..), but the listing is as follows: 'LISTER"

```
 10 spc$="  ":HIMEM=&3000:*LOAD LISTCD
    E
 20 ON ERROR CLOSE#0:VDU 3:IF ERR=17 A
    ND INKEY-1 THEN END
 30 REPEAT
 40   *FX 4,1
 50   VDU 22,7
 60   PRINT TAB(12,0)CHR$141;CHR$129;"
      L I S T E R !"
 70   PRINT TAB(12,1)CHR$141;CHR$131;"
      L I S T E R !"
 80   PRINT TAB(14,2) CHR$131;"VERSION
       1.5"
 90   PRINT TAB(4,4) CHR$129;"COPYRIGH
      T BADGER SOFTWARE 1985"
100   PRINT TAB(0,6) CHR$148;STRING$(3
      9,CHR$240);
110   FOR T=1 TO 16
120     PRINT CHR$148;CHR$181;CHR$134;
        TAB(38,VPOS) CHR$148;CHR$234;
130     NEXT
140   PRINT CHR$148;STRING$(39,CHR$163
      );
150   VDU 28,3,22,37,8
160   REPEAT
170     INPUTLINE TAB(0,0),"Source fil
        ename : " SOURCE$
```

```
180     CHAN%=OPENUP(SOURCE$)
190     IF CHAN%=0 THEN PRINT TAB(0,13
        ) CHR$129;CHR$157;CHR$131;"  C
        ould not find that file    ";C
        HR$156;CHR$7;:DUM=INKEY(200):C
        LS
200     UNTIL CHAN%>0
210   PRINT'" Print listing heading?
       N"
220   PRINT " Print line numbers?
       Y"
230   PRINT " Statement/line (N/B/M/A)
       M"
240   PRINT " New page for DEFs?
       N"
250   PRINT " Indent REPEAT/FOR loops?
       Y"
260   PRINT " Number of indent spaces?
       2"
270   PRINT " Output to printer?
       N"
280   PRINT " First line in printout?
       START"
290   PRINT " Last line in printout?
       END"
300   PRINT " Width of output print
       80"
```

```
310   PRINT'"Set options then press <L
      > to list"
320   done=FALSE:lines=TRUE:Bnewline=F
      ALSE:Anewline=TRUE:new_page=FALS
      E
330   hardcopy=FALSE:start=0:end=0:ind
      save$=" ":heading=FALSE
340   width=80:indent_Rs_Ns=TRUE:line=
      0
350   REPEAT
360     PRINT TAB(0,VPOS);CHR$156;
370     PRINT TAB(0,line+2);CHR$131;TA
        B(28,line+2);
380     IF line=0 THEN heading=FNANS("
        YN")
390     IF line=1 THEN lines=FNANS("YN
        ")
400     IF line=2 THEN newlines=FNANS(
        "NBMA"):Anewline=(A$="M" OR A$
        ="A"):Bnewline=(A$="B" OR A$="
        A")
410     IF line=3 THEN new_page=FNANS(
        "YN")
420     IF line=4 THEN indent_Rs_Ns=FN
        ANS("YN")
430     IF line=5 THEN spc$=STRING$(FN
        ANS("0123456")," ")
440     IF line=6 THEN hardcopy=FNANS(
        "YN")
450     IF line=7 THEN start=FN_INP_NU
        M(32767)
460     IF line=8 THEN end=FN_INP_NUM(
        32767)
470     IF line=9 THEN width=FN_INP_NU
        M(132)
480     IF line<9 THEN line=line+1 ELS
        E line=0
490     UNTIL done
500   IF end=0 THEN end=32767
510   IF end<start THEN end=start
520   *FX 21,3
530   PROC_DO_LIST
535   done=FALSE
540   PRINT ''''"Do you want another l
      isting ? (Y/N) ";
550   UNTIL FNANS("YN")=FALSE
560 *FX 4,0
570 MODE 7
580 END
590
600 DEF FNANS(allowables$)
610 REPEAT
620   A$=GET$
630   UNTIL INSTR(allowables$+"L"+CHR$
    13,A$)
640 IF A$="L" THEN done=TRUE
650 IF done OR A$=CHR$13 THEN A%=&87:A
    $=CHR$(USR&FFF4 DIV &100 MOD &100-
    1)
660 PRINT A$;
670 ans=FALSE
680 IF A$="Y" THEN ans=TRUE
690 IF VAL(A$)>0 THEN ans=VAL(A$)
700 =ans
710
720 DEF FN_INP_NUM(highval)
730 REPEAT
740   NUM$="":num_len=0:newval=TRUE
750   REPEAT
760     A$=GET$
770     IF A$="L" THEN done=TRUE
780     IF newval AND A$<>CHR$13 AND N
        OT done THEN VDU 32,32,32,32,3
        2,8,8,8,8,8:newval=FALSE
790     IF ASCA$>47 AND ASCA$<58 AND n
        um_len<5 THEN NUM$=NUM$+A$:PRI
        NT A$;
800     num_len=LEN(NUM$)
810     IF num_len>0 AND A$=CHR$127 TH
        EN NUM$=LEFT$(NUM$,num_len-1):
        PRINT A$;
820     UNTIL A$=CHR$13 OR done
830   IF VAL(NUM$)>highval THEN VDU 7:
      PRINT STRING$(LEN(NUM$),CHR$8);
840   UNTIL VAL(NUM$)<=highval
850 VDU 13
860 IF newval THEN NUM$="0":IF line=9
    THEN NUM$=STR$(width)
870 =VAL(NUM$)
880
890 DEF PROC_DO_LIST
900 VDU 22,0
910 illegal=TRUE:LAST=FALSE
920 IF hardcopy THEN VDU 2
930 IF heading THEN PROCheading
935 PRINT CHR$13;CHR$10;
940 PTR#CHAN%=1:assembly=FALSE:quoteto
    ggle=FALSE:indent$=" ":rem=FALSE
```

```
 950 testval=BGET#CHAN%
 960 REPEAT
 970   REPEAT
 980     linenum$=STR$(testval*256+BGET
         #CHAN%)
 990     line_length=BGET#CHAN%
1000     IF VALlinenum$>=start AND VALl
         inenum$<=end THEN illegal=FALS
         E
1010     IF VAL(linenum$)>end THEN ille
         gal=TRUE:LAST=TRUE
1020     IF illegal THEN PTR#CHAN%=PTR#
         CHAN%+line_length-3:testval=BG
         ET#CHAN%
1030     UNTIL LAST OR NOT illegal
1040   IF LAST THEN GOTO 1260
1050   IF NOT lines THEN linenum$=" "
1060   REPEAT
1070     firstchar=BGET#CHAN%
1080     UNTIL firstchar<>32
1090   IF firstchar=&DD AND new_page TH
       EN VDU 12
1100   PTR#CHAN%=PTR#CHAN%-1
1110   PRINT RIGHT$("    "+linenum$,5);
1120   IF NOT assembly OR (assembly AND
        firstchar<>ASC"." AND firstchar
       <>ASC"\") THEN PRINT indent$; EL
       SE PRINT " ";
1130   IF firstchar=ASC"*" THEN rem=TRU
       E
1140   REPEAT
1150     char$=CHR$(BGET#CHAN%)
1160     IF char$=CHR$&F4 OR (char$="\"
          AND assembly) THEN rem=TRUE
1170     IF char$=CHR$34 THEN quotetogg
         le=NOT quotetoggle OR rem
1180     IF char$=CHR$13 THEN quotetogg
         le=FALSE:rem=FALSE
1190     IF char$="[" AND NOT (quotetog
         gle OR rem) THEN assembly=TRUE
         :indsave$=indent$:indent$=STRI
         NG$(11," ")
1200     IF char$="]" AND NOT (quotetog
         gle OR rem) THEN assembly=FALS
         E:indent$=indsave$
1210     IF NOT assembly THEN PROC_CHEC
         K_INDENTS(char$)
1220     PROC_PRINT_CHAR(char$)
1230     UNTIL char$=CHR$&0D
1240   testval=BGET#CHAN%
1250   IF testval>127 THEN LAST=TRUE
1260   UNTIL LAST
1270 CLOSE#0:VDU 3
1280 ENDPROC
1290
1300 DEF PROCheading
1310 PRINT "  ";STRING$(width-4,"*")'
1320 PRINT TAB(width DIV 2 - LENSOURCE$
     );:VDU 1,14:PRINT SOURCE$':VDU 1,1
     5
1330 PRINT "  ";STRING$(width-4,"*")
1340 ENDPROC
1350
1360 DEF PROC_CHECK_INDENTS(char$)
1370 char=ASC(char$)
1380 IF (char=&E3 OR char=&F5) AND inde
     nt_Rs_Ns THEN indent$=indent$+spc$
1390 IF (char=&ED OR char=&FD) AND inde
     nt_Rs_Ns AND LEN(indent$)>1 THEN i
     ndent$=LEFT$(indent$,LEN(indent$)-
     LEN(spc$))
1400 ENDPROC
1410
1420 DEF PROC_PRINT_CHAR(char$)
1430 colonOK=char$=":" AND ((NOT assemb
     ly AND Bnewline) OR (assembly AND
     Anewline)) AND NOT (quotetoggle OR
      rem)
1440 IF char$>CHR$&7F AND NOT quotetogg
     le THEN char$=FN_GET_TOKEN_NAME
1450 FOR print=1 TO LEN(char$)
1455   endF=FALSE
1460   posit=COUNT MOD width
1470   IF posit=1 THEN endF=TRUE
1480   IF ((endF OR char$=CHR$13) AND w
       idth<132) OR colonOK OR (NOT end
       F AND char$=CHR$13) THEN PRINT C
       HR$13;CHR$10;
1490   IF endF AND NOT(colonOK OR char$
       =CHR$13) THEN PRINT "     ";inde
       nt$;
1500   IF colonOK THEN PRINT "     ";ind
       ent$;
1510   IF char$<>CHR$13 AND (char$<>":"
        OR NOT assembly OR rem OR Anewl
       ine=FALSE) THEN PRINT MID$(char$
       ,print,1); ELSE IF char$=":" THE
       N PRINT " ";
1520   NEXT
1530 ENDPROC
```

CONTINUED ON PAGE 23

USER DEFINED KEYS

EDITOR'S NOTE

Please excuse the cobwebs on this one. The Centaur submitted it last year, but unfortunately there was a bug in the KEY 2 definition (typing error?). I rarely get time to debug listings during mag preparation, and put this in a safe place for future action... My profound apologies to the Centaur.

The Centaur writes:

For this issue of beeblet I have included some things to do with your user defined function keys at the top of the keyboard. First, a bit of technics. If you have a HiRez monitor, you will apreciate the value of "*TV 0,1" command. Unfortunately this does not work in Mode 7. The Advanced User Guide suggests that the statement

```
"VDU23;8,144;0;0;0,23;9,9;0;0;0,23;10,9;0;00¦M"
```

be used. Unfortunately this does not work in Mode 7, so it deserves its own key definition:

```
*KEY 3 VDU23;8,144;0;0;0,23;9,9;0;0;0,23;10,9;0;0;0¦ML.¦N¦M
```

Great for word processing, and listing programs.

And speaking of listing programs, one key I have ALWAYS defined the same way is KEY 0 to list a program in Mode 7 with paging on:

```
*KEY 0 L.O7¦V7¦M
```

Which is basically saying LIST O7 (indent FOR/NEXT, REPEAT/UNTIL loops), change to MODE 7, turn on paged mode, and list (although not necessarily in that order). Both of the above keys can be combined into one so that the display is listed stably:

```
*KEY 0 L.O7¦V7¦M
VDU23;8,144;0;0;0,23;9,9;0;0;0,23;10,9;0;0;0¦ML.¦N¦M
```

If you are doing assembler work, it is useful to define KEY 10 as OLD to retrieve your your program if, like me, you fault find by letting your program crash, thus locking the keyboard:

```
*KEY 10 OLD¦M
```

And finally I have a short assembler program to turn KEY 2 into a decimal to hexidecimal or binary converter. After running the program a lot of garbage will appear followed by a question mark on the next line. Enter a decimal or hexidecimal number and hit return. The binary equivalent will appear on the next line. If it doesn't, and the Keyboard appears to lock up, hit BREAK (which by now has been defined to OLD your program), and recheck that you have entered the program correctly.

The programme is assembled at the top of the Key Definition memory, so that as long as a CTRL BREAK is not done, it should survive as long as the rest of the Key definitions.

Happy Hunting
The Centaur

Program rundown:

Line: 10.....Sets up KEY 2 to input a number D$ (if its Hex it converts it to decimal), place it in a location that the converter program can find, and then call the program.
20..... Tells the assembler to assemble the program at the top of the Key Definition memory.
30.....Enter the assembler.
40.....Assembler Option
50.....X holds the number of bytes to convert. (7)
60.....Sets up loop to convert each of the seven bits
70.....Load A with the Ascii code for "0"
80.....This shifts the bit we are converting to the carry flag
90.....Add the value in the carry flag onto A. If the number in the carry flag was zero then A keeps the Ascii code for "0" otherwise A takes the Ascii code for "1"
100.....Jump to the Operating System routine to send the value in A to the screen.
110.....Decrease X
120.....If X>0 then we still have some bits to do.
130.....Print a carriage Return
140.....End of the subroutine and re-enter BASIC.
150.....Exit the assembler

The listing:

```
 10 *KEY2I.D$|?&BFF=EV.D$|CA.&BEC|M
 20 P%=&BEC
 30 [
 40 OPT T
 50 LDX  7
 60 .BINLP
 70 LDA  48
 80 ASL &BFF
 90 ADC  0
100 JSR &FFEE
110 DEX
120 BPL BINLP130 JSR &FFE7
140 RTS
150 ]
```

"LISTER" continued from page 20.

```
1540
1550 DEF FN_GET_TOKEN_NAME
1560 A%=ASC(char$)
1570 X%=&71:Y%=&80
1580 IF A%<>&8D THEN CALL &900:char$=$&
     962 ELSE char$=FN_GET_LINE_NUM
1590 IF A%=&80 THEN char$="A"+char$
1600 =char$
1610
1620 DEF FN_GET_LINE_NUM
1630 REPEAT
1640   char$=CHR$(BGET#CHAN%)
1650   UNTIL char$<>" "
1660 =STR$((9-ASCchar$ DIV 16) MOD 4*64
     +BGET#CHAN%-64+(BGET#CHAN%-64)*256
```

"LISTCDE"

```
28804 ERROR{EVALPOSpEOF{PLOTGCOLpPAGER
      EPORTGCOLqLGETpERRORrGETqERRORsG
      ETpPAGEAUTOqAUTOpPOSpREMGETr8GOT
      OpERRORrEVALPOSpATN`LOADSTRING$(
      rPAGEREPORTLEN
```

MASTER MATTERS

Neil Gordon

Now that my Master has finally arrived - via surface mail as it turned out - I have been having a good play with it and gradually converting all my disks over from DFS to ADFS. This is the first of what I hope will be a number of columns dealing specifically with good ways of making use of the additional features of the Master, and answering any enquiries you might have - send in your questions to me, care of the User Group. (Any concrete suggestions on how Barsons should be promoting the Master will also be welcome. I wonder how Tim is getting on - hope he doesn't lose his CHAIN again.

First, though, I encountered a problem with my Master which had me very baffled (and worried) for a couple of hours until it was tracked down. It is worth describing in case anyone else should encounter a similar problem. What happened was that if I pressed SHIFT or CTRL in combination with any other key, the computer would ignore it. I immediately suspected the keyboard and dismantled the computer to have a look at it, but could find no obvious problem. Furthermore, the computer was obviously recognizing the SHIFT and CTRL keys since holding them down together did stop listings to the screen as it is supposed to.

When I turned the computer back on, it wouldn't boot up in ADFS as it was supposed to, but insisted on coming up in the TAPE filing system. This made me suspect that the operating system ROM might be at fault. Then I remembered that pressing a key when the system boots will make it come up in a different filing system - for example, A + BREAK gives the ADFS, D + BREAK the DFS, Z + BREAK supposedly gives the DFS but with 8271 emulation (???), and T + BREAK gives the TAPE filing system. What if, on booting the computer thought there was a key pressed that made it switch to TAPE rather than ADFS. I immediately wrote a short program to use the operating system to see what keys were being pressed and discovered that it thought the ESCAPE key was down all the time!!! EUREKA!! I prised the keytop off, fiddled with the switch a bit, then put the key back again and all was well, thank goodness. I didn't relish the prospect of sending the computer back to Britain or paying to have it repaired here.

Another fault that my Master had was that the SHIFT LOCK Led wouldn't come on. Examination of the keyboard printed circuit board showed a dry solder joint - one of the Led pins was quite loose. A bit of extra solder cured it. I have heard of this happening on several other Masters, too.

Now for some hints and tips on the Master, some of which have arisen from questions from other new Master owners. Remember - send yours in and I'll try to answer them.

The first point concerns backing up the WELCOME disk. This is a special 40/80 track format disk. In effect, the information is stored in 40 tracks on one side of the disk, and 80 tracks on the other. The basic catalogue information is on the first track of the first side, so can be read by either sort of drive. 40 track drives will just read the one side, and work perfectly well. However if, like most of us, you are using 80 track drives, you will CHAIN "WELCOME80" to convert the disk to 80 track format. This works by changing the catalogue information to point to the other, 80 track, side of the disk. Clearly, you cannot use the ordinary ADFS backup utility to back up this disk, since the 40 track side will not be read properly. Instead, use the copy directory utility to copy everything, starting from the root directory, to another disk.

Be careful when using the EDITor on BASIC programs. If you put in a new line, or edit an existing one, so that it is longer than 255 characters then when you return to BASIC the program will be lost from that point on, WITHOUT TELLING YOU!! Aside from that, it's brilliant to switch between BASIC and the EDITor - even better than my old system using WORDWISE which was only in 40 columns.

Speaking of WORDWISE, the latest versions of WORDWISE PLUS will work perfectly well on the Master, and make use of the shadow memory to previewin Mode 0 even when there is a large amount of text in memory. Older versions may work as well (though without using the shadow memory) provided you ensure that the byte stored at location &8006 is &C2 and not &82. (Bit 6 should be set to indicate that it is a language. This trick will also work on COMMSTAR to make it run on the Master.) For myself, I now prefer to be able to edit in 80 columns and will be sticking with VIEW for the time being - I am gradually learning its idiosyncracies.

You probably know that you can switch to a different directory on the ADFS by giving enough characters to identify it, followed by the * wildcard.

For instance, if you have subdirectories GRAPHICS and GENERAL in the root directory, you can use the command *DIR GR* to move into GRAPHICS. It turns out that this trick will work with file names as well. If you have programs CIRCLE and PICTURE in GRAPHICS, then CHAIN "C*" will be sufficient to run CIRCLE. These could be put together - from the root directory the command CHAIN "GR*.C*" would also run the program. Isn't that nice?

Finally, anytime you give an operating system command you can temporarily switch to a different filing system for the duration of the command. This is done by putting the file system name between hyphens just after the *. For instance, if you are in ADFS on drive 0, the command *-DISK-. will catalogue a DFS disk on drive 3. The filing system type can also be put in front of any filename.

That's enough for this month - next time I'll tell you how to automatically date stamp a BASIC program whenever you save it, and how to double the MODE 0 screen resolution to 640 by 400, plus answer any questions you might have.

* * *

LAST CHANCE!

more RAM in the ELECTRON

After much waiting, the odd exam, a baby son, and general experimenting. The Electron 32K sideways RAM board will immerge like no other hardware product has before. (Not that I could pin-point the difference.

The price looks like being just over $100 dollars now. This is affected by how many we can make, so if you leave your enquiriry till next week, it might cost more. For more information, write to:

Electron RAM board
Steve Cosgrove
C/- BBC/Acorn Computer User Group NZ IncP O Box 9592
WELLINGTON

QUICKLY!

Electron Column

Steve Cosgrove

The advantages of normality come up again this month. The 'standardised' operating system within the Acorn computers allows some hardware items to be shared. This includes not only 'standard' things like monitors and printers, but also many ROM based programs, as I have said before, and Cartridges in the Electron and Master. Two other hardware add-ons talked about in the Electron Advanced Users Guide, but not common in New Zealand, are Serial (RS423) interface, and Second Processor. This month I will present a basic introduction to each.

Most computer users will add a printer at some stage. The BBC has two sockets which can be used for the purpose. Which to use depends on the type of printer. Electron PLUS ONE users have a 'Centronics Parallel' socket, but not the other, (RS423 serial). Parallel printers need a large number of wires going from the computer to the printer. Eight of these are used to send a character along. On the other hand, a serial printer only needs 2 - 5 wires. In this case the 'bits' of a character are sent one after the other. As electricity travels at the speed of light, this transfer doesn't take very long, but is slower than parallel, and generally less popular for printers. However, for two-way communication, serial is far more popular, as, with fewer wires to worry about, there is more chance that the computers will be happy to communicate. There is a popular serial interface called RS232, which is totally compatable with RS423.

Earlier this year there was much talk in Beeblet about the 'Volksmodem'. Modem stands for 'MOdulater, DEMomulater' which does not help most people. Basiclly, two of these allow two computers to talk to each other via the telephone system. Obviously the serial interface must be used for this, as there are only two wires which the system can use. There are a number of plug-in cartridges available from England which give an Electron the RS423 capability. We hope to have some details on these in the next Beeblet, otherwise, write to the User Group, and ask, we can send you details, but please enclude 45c return postage.

The other hardware addition I have heard about lately is a 2nd Processor.

The BBC range (inc Electron) have, as the central 'workhorse' or processor, one '6502'. I have written other articles about how the Electron is slowed down by having this one processer to do everything. The capability has always been within the Electron to divide up the work, by using another 6502 attached through a PLUS ONE socket. Now two companies seem to be supplying the neccessary bits to make this a reality. 'Advanced Computer Products' of Surry, England, have been advertising a cartridge which allows, among other things, an Acorn 2nd processer to be plugged in to it. The add was in April '86 Acorn User, and has been other places too. Unfortunatly this is rather expensive, as the 2nd processor costs about $600.00, then theres the extra board to send to England for (if it is available yet). A far cheaper alternative was a 2nd Processer which I have not seen advertised, but which was the subject of an artile in April's 'A & B Computing'. Its title was 'Electron GT', so no BBC users I have talked to actually read it - foolish people. Not only is this board only a fraction of the price of the Acorn product, (about 70 pounds complete) but it comes with instructions for use in a BBC B. (Probably works in the Master too!) I have sent to Wales, asking for more information. Watch Beeblet for details when I have more to say about it.

Please write soon!

Luv Steve

Odds and ends

I have reliable information that the Nightengale Modem (not approved by NZ Post Office) works fine with the Electorn RS423 cartridge which comes free with it. All-up cost? 119 pounds.

'Electron User' (an English magazine) is appearing at random bookstands around Wellington. Someone even spotted one in Whitcoulls - proably the best support they have for the Electron.

Speaking of that enchanting magazine (second only to Beeblet for execllence (if not spelling)) it featured a review of a magic little board which seems to make an Electron do everything as fast as a BBC B. Price was about 30 - odd pounds, but you have to unsolder some chips yourself - YUCK!

Only ONE reply to the RAM/ROM board so far, and ONE other letter in toto - sometimes I wonder if anyone other than my wife reads this column (and she ,only to correct the spelling). Or maybe I am writing the wrong things - please tell me.

↓↓

And finally, in relation to that, Gordon & Donella, I have a board with you could have, but there is a catch, I will write when I have time. Thanks for writing.

↓↓

WELLINGTON: IN FROM THE COLD?

Neville Hudson, currently Vice President of the User Group announced at the August meeting that he had been appointed as a Barsons (Acorn) dealer in Wellington. Plans were in hand to establish premises in which both hardware and a full range of software will be displayed. This is good news for members in the light of the appaent decline in interest in Acorn products evident in some commercial quarters.

****

VIDEO DIGITISER

Adds have become a rare event in Beeblet : Perhaps its time for another major campaign? Anyway, included this month is an add from John Curtis of Hawkes Bay for a Video digitiser made by "a friend and I". John notes in his covering letter that the digitiser "is very cst effective" as far as digitisers go. The software is top quality and includes the digitiser program, a picture cropper and a useful BASIC procedure allowing you to display a cropped picture anywhere on the screen."

****

NEW ACORN BABY

According to the latest Micro User, Acorn are about to launch a new little BBC, bundled with monitor and a 3.5 inch disc drive, for 500 pounds. Interesting.... or too late?

CONTRIBUTIONS -

I am always grateful to receive contributions in whatever format (BASIC wordprocessors through VIEW) is convenient to the sender. I use Wordwise+ and in the case of tape or disc contributions, usually just load them and if necessary delete any foreign embedded codes. The fewer of these the better, especially if a VIEW file that has been right justified and then spooled...

↑↑

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Write to: John Curtis,
8 Lipscombe Cres.,
Havelock North.
HAWKES BAY.

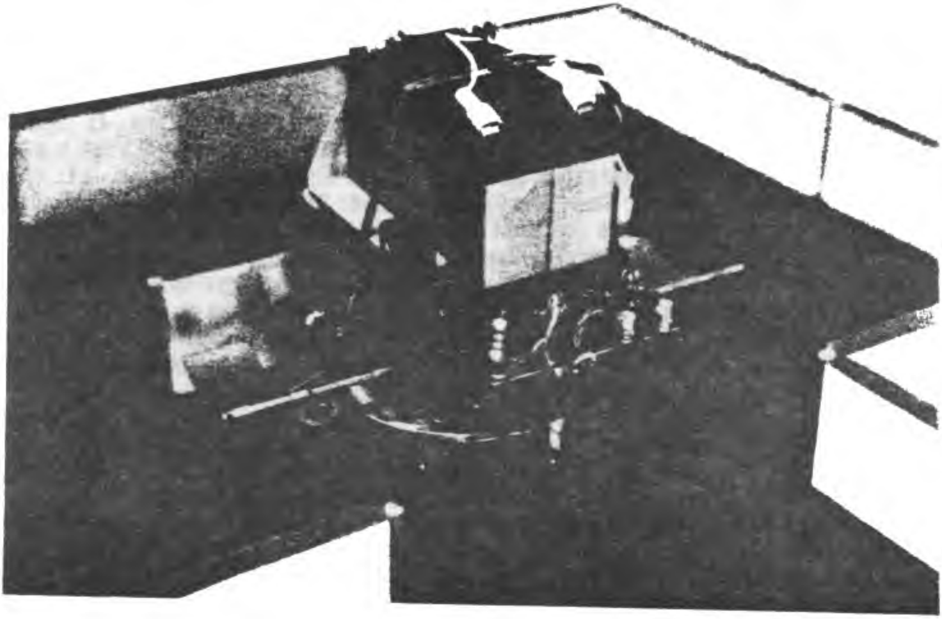
We pay for postage anywhere in NZ.

OF MICE AND BUGGIES

Reading through issues of the Tokoroa Acorn Users Group Newsletter I found series on "mice" and "buggies"(or "turtles" construction and software. I will take up Graeme Robertson's offer of material on this one, provided the authors of the articles are agreeable.

A "buggy",or "turtle" is a mechanical beasty usually tethered via a cable to the Beebs user port. Under the control of the Beeb it is able to explore the outside world. Some of you may recall the review of six of the creatures in the November 1984 Acorn User.

A "micro mouse" is a little more independent - it has been defined as "a miniature self contained robot, usually controlled by a micro-processor..."* designed to find the quickest path to the centre of a specially constructed maze..



---

*From a handout produced by the Wellington Microcomputer Society at the time of their maze and micromouse exhibition at the 1983 NZ Computer Conference. See Beeblet, July 1983, p12.

At some stage in the past I mentioned something in Beeblet about the Wellington Microcomputer Society's micromouse maze, and little "daisy" mouse.

Well, the maze still exists, as does the literature the Society collected relating to mouse construction, plus the rules for a micromouse competition, derived from those published in Practical Computing, April 1982. There might even be a few traces of maze paint in my "spare" bedroom!

The first Micromouse Contest was held in the US by IEEE Spectrum, followed by similar contests in the UK and Europe.
The problem with getting such a competition off the ground in N.Z. was finding interested people with both the time and competence to build and program such a beasty. At the time the Wellington Microcomputing Society was actively promoting such a contest, consideration was given to different classes of beasty (eg. controlled remotely by a pre-programmed micro), and avenues of competition other than maze solving. Although a lot of interest was expressed, only one mouse actually got built.

The maze consists of 16 by 16 squares. The squares are based on a 180mm (7 inch) matrix. The walls are 12mm (0.5 inches) thick, 50mm (2 inches) high and painted white with red tops. Passageways are 168mm (6.5 inches) wide. The 25mm (1 inch) square target post at the centre is 200mm (8 inches) high, and can be removed if desired. The "starting square" is at the "bottom left" corner of the maze, and the mouse is initially orientated so that its target is diagonally to its right. The running surface is fine chipboard, coated with matt black paint. Tolerances may well be out by 5% however, and the walls are not strictly continuous because the Wellington maze uses sections of dowell plugged into holes drilled at each corner of the intersections of each of the 16 squares to retain the walls (so that the maze can be readily reconfigured).

The maze and mouse are trotted out and demonstrated from time to time. If a number of groups are interested, the Society would certainly be interested in reviving some form of mouse / buggy / turtle and/or related software competition. They might even be able to raise sponsorship...

It would also be relatively easy ro create a software maze to test the relative efficiency of maze solving software.

Drop a line to Beeblet if you are interested in either a micromouse contest or a maze solving program (software mouse / turtle or whatever).

A FATE WORSE THAN DEATH

Tony W. Napier

You'll have read in the July Beeblet,
How girls and computers don't mix.
Well I've lost my computer AND girlfriend,
Is that not a terrible fix?

Sue was the girl, and her hair had a curl,
Like a telephone cable, but brown.
Her fingers had strength, and just the right length,
For pressing word processor keys down.

Her cheeks were as red as the Beebs function keys,
Her teeth were like white microchips.
Her eyes were like green VDUs with the brightness at '2',
A sine wave was the curve of her lips.

I conceded defeat, that she rivalled Elite,
Until one night when she called.
I was trying to write a utility, and
I had to admit I was stalled.

She stood by my chair, I was in despair,
Machine code ideas I had none.
Then she reached out her hand, "Don't do that" I cried, and
She pressed BREAK and my program was gone.

I ranted and raved, it couldn't be SAVEd,
My face and my neck were quite red.
Now when she calls, SHE plays with the Beeb,
And I go and play football instead!

Confidential to Members.
11 August 1986

DISCOUNT STOCKS

We are currently holding stocks as follows:-

Disks (box of 10)	3M DSDD 5.25"	$45.00 + $1.00 pp
"	3.5"	$85.00
Tapes(packet of 20)	Tracer C10	$30.00 + $2.00 pp
Tape(New Member)	EMI C30	$5.00
Paper fan-fold	M & P 1110/1	$5.00 + $1.00 pp per 200 sheets
Beeblets Vol 1	5,6,10,11	$0.50 each
" Vol 2	all except May	$1.00 each
" Vol 3	all	$1.50 each
" Coping out of stock issues		$3.00 each

Special
Two complete sets of volumes one and two Beeblets have just been located. These are available at $15.00 per volume.

Beeblet Covers	Pre-V-Dex(2 Vols)	$4.50
Printer ribbons	Logitec loops	$10.00
" Ink	100 ml bottle	$10.00

Wellington members these are available at both monthly meetings and workshops. For other members postage will be arranged on receipt of your cheque.

BULK DEALS

Bulk deals will again be arranged in September. Initial orders are received without payment. You will be asked to confirm your order in September at which time a firm price will be available, and goods will be available on receipt of payment. Freight is payable on all goods for out of Wellington members.

Printers	Solar 120EX	$635
	Cables	$30
Disk drives	Teac FD55FV 80 Track double sided.	
	Twin drives case & cables	$760
	Single drive case & cables	$420
	Bare drive	$350
	Cables	$50
DFS		$265
Monitors monochrome		
	Mitsubishi SV1290	$250

SERVICE AGENTS AND DEALERS

The NZ network of service and dealers for the BBC are as follows:

AUCKLAND:

Sales and Servicing-
Barson Computers NZ ltd, ph. 504-049
504-631
1 Ngaire Avenue,
Auckland .3.

John Gilbert Electronics, ph. 390-839
75 Parnel Rise,
Parnell.

Other Dealers-
Computer Terminal, ph. 419-053
Hinemoa St

Neil Gladden,
Data Base Services,
8 Kowhatu Rd

Whitcoulls Ltd -
186 Queen St ph. 778-329
312 Broadway,Newmarket ph. 543-129

BLENHEIM

Whitcoulls Ltd, ph. 88-039
30 Market Street North

CHRISTCHURCH:

Sales and Servicing-
Aftron Computers Ltd ph. 797-445
161 Barbados St.

Dealers-
TVNZ Enterprises Shop,
P.O. Box 1945

Whitcoulls Ltd-
111 Cashel St ph. 794-580
Canterbury Centre, High St ph. 50-159
201 Manchester St, ph. 787-561

DUNEDIN:

Whitcoulls Ltd, ph. 774-120
143 George St.

HAMILTON

Whitcoulls Ltd. ph. 82-174
175 Victoria St.

INVERCARGILL

Whitcoulls Ltd, ph. 86-063
66 Dee St.

SOUTHLAND

Lyndon McEntee, ph. 7365
Educomp,
P.O. Box 255,
Gore.

TARANAKI

Winston Electronics ph. 298 7769
26 Berwyn Ave.

TAURANGA:

Sales and Servicing-
Graham Cheer

Whitcoulls Ltd ph. 87-738
97 Grey St

TE PUKI

May & Associates ph. 83-257
P.O.Box 345.

TIMARU

Whitcoulls Ltd. ph. 88-185
182 Stafford St,
Timaru

WANGANUI

Whitcoulls Ltd, ph. 54-193
148 Victoria Ave

WELLINGTON:

Servicing-
APTEC
(Applied Engineering and Technology)
3 Halleys Lane ph. 850-811
850-800

Dealers-
Whitcoulls Ltd,
312 Lampton Quay ph. 721-921

USER GROUP MEETINGS

AUCKLAND: -meets 2nd Wednesday of the month, 7.30pm, Conference Rooms, Auckland Secondary Teachers College,60 Epsom Ave, Epsom. ph Dave 770-630 x 518(bus) or Kerry 695-355.
-North Shore: meets last Wednesday of the month, 7.30pm, Salvation Army Hall, Glenfield Road, Glenfield ph Chris 419-0543 (wk)
CHRISTCHURCH: -fortnightly workshops, Monday 6.30pm at Hagley High School. ph. Michael 582-267.
DUNEDIN: -first Thursday of the month. Phone Martin McDowall 42-031
HAWKES BAY: -Alternative months Hastings & Napier. Contact Kendall Napier 435-624, Bob Taradale 446-955, Mitch Hastings 778-235.
INVERCARGILL: -Phone Evan 330-444 Invercargill.
PALMERSTON NORTH: -Phone Tom Skinner 83-009(wk)
ROTORUA: -Phone Ian 85-583 or Joan 81-536 (independent group)
TAUPO: -meets every second Wednesday @ 7pm. Contact David 84-215 (h), 85-124 (wk).
TAURANGA: -every second Wednesday. ph. Chris & Jane 65-076.
TIMARU: -Phone Lloyd van der Krogt Timaru 61-412.
TOKOROA: -1st Friday of month, '.30pm, Tokoroa High School. Contacts Don Fraser, 68-813 or Graeme Robertson, 65-346 Tokoroa.
WAIKATO: -first Monday of the month 7.30pm Waikato Tech Institute. Ph. Alison or John, Morrinsville 6695.
WELLINGTON: -meets usually second WEDNESDAY of the month, 7.30pm, Royal Society Lecture Theatre, Turnbull St, Thorndon. Other dates advised in Beeblet regional news.(May p.39)
-Workshops: fourth Wednesday of month, other venues. ph. Don 848-235 or Mike 785-437.
OTHER CENTRES: - let us know and we will publish details here.

THE NEWSLETTER:

CONTRIBUTIONS:-most welcome. Listings should be sent in on tape or disc. (Tape - 2 copies, one at 300 baud please). Please include written explanation of listing; text and graphics only material welcome too.

DEADLINES:- For a particular issue, the last day for material is the last day of the month prior to publication.

ADVERTISING:- Rates are $20 per half page (camera ready), deadline as above.

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MEMBERSHIP:

Membership of the users group is on payment of an annual subscription from April to March. For the 1986/7 year it is: $30.00, plus $5.00 for Wellington members as a local branch levy, which entitles attendance at meetings as detailed above. Joining or renewing members get all the back issues of the current year - those joining from 1 October may have half the annual sub waived and only receive newsletters from 1 October.

THE BBC/ACORN COMPUTER USER GROUP OF NZ INC, P.O.Box 9592, WELLINGTON.

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